

[Honeycomb Catalyst Substrate Coating Chamber Seal Cleaning System]

Abstract

The current invention reveals equipment and the method to utilize it to reduce or eliminate seal deposition in equipment that uses inflatable seals where a solution can come into contact with the seal and leave a deposit. Typical of this process is the coating chamber used to prepare honeycomb substrate for catalytic converters. For catalytic converter coating, the invention sprays the solvent of the coating solution, typically water, in a flat fan spray across the coating chamber in a high pressure pulse in such a manner as to produce a thin film of water on the seal surface, and reflect from the seal surface to clean multiple seals within the chamber. The film of water removes deposits, interferes with further nucleation, and the wet seal forms a tighter seal with less pressure. Water is pulsed with a metering pump through rigid or semi-rigid tubing to fixed spray nozzles when the substrate is removed from the coating chamber. The pulse takes less than 1 second. The unique nature of the invention minimizes and in some cases avoids the effect of coating solution dilution from the

cleaning system.